



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,379	01/22/2001	Bertram Gunzelmann	GR 98 P 8060 P	2354
24131	7590	11/01/2005	EXAMINER	
LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480			AHN, SAM K	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/767,379	GUNZELMANN ET AL.	
	Examiner	Art Unit	
	Sam K. Ahn	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The declaration filed on 09/26/05 under 37 CFR 1.131 is sufficient to overcome the Sourour et al. USP 6,363,105 B1 in view of Rodal USP 5,883,596 reference.

Response to Arguments

2. Applicant's arguments, see p.2-3, filed 08/05/05, with respect to the rejection(s) of claim(s) 1,2 and 6 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ostman USP 5,590,160 in view of Scott USP 5,802,046.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,2,6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostman USP 5,590,160 in view of Scott USP 5,802,046.

Regarding claim 1, Ostman teaches a communication acquisition method, which comprises correlating (52 in Fig.7) a received binary-coded spread sequence

arriving at a frequency f and having m bits with a locally generated spread sequence (50) having m bits, the locally generated spread sequence having k sections (four sections, $c_1 \sim c_4$ in Fig.8), the correlating step comprising the following steps: storing the received binary-coded spread sequence (62,64), splitting the stored received binary-coded spread sequence into k sections (four from 62 to be correlated with $c_1 \sim c_4$), and correlating the k sections of the stored received binary-coded spread sequence with corresponding k sections of the locally generated spread sequence, wherein m and k are integers greater than 1, and k is smaller than m (note col.7, lines 9-27).

However, Ostman does not explicitly teach correlating at a frequency $k*f$.

Scott teaches correlating at a frequency $k*f$ (*sampling at four times the code rate or sampling rate or higher*, note col.51, lines 47-58). Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teaching of Scott in the system of Ostman by oversampling the received signal by placing the switch (receiving signal 1810 in Fig.18) prior to the A/D (16 in Fig.8 of Ostman) to oversample four or eight times the rate for the purpose of receiving a higher sampling rate of the received signal, and thus calculate a more accurate correlation measurement. It is well-known in the art that oversampling twice the sampling rate is performed to meet the Nyquist rate, and thus by oversampling four or eight times the sampling rate, one skilled in the art analyzes that the accuracy is even higher.

Regarding claim 2, Ostman in view of Scott teach all subject matter claimed, as applied to claim 1. Ostman further teaches upon correlating each section of the stored received binary coded spread sequence, shifting the bits of a respective section by one bit to replace the least significant bit of a first section variant by a succeeding bit of the received binary-coded spread sequence and to shift a most significant bit of the first section variant to be a position of the least significant bit of a succeeding section variant (see 62 in Fig.8, wherein the limitation recited is an inherent function of a shift register).

Regarding claim 6, Ostman in view of Scott teach all subject matter claimed, as applied to claim 2. Ostman further teaches summing the correlation results obtained per section correlation step over k section correlation steps to obtain a count result (80,82 in Fig.8); repeating the shifting step m-1 times for obtaining m-1 count results (62,64 in order to cover each of the register); and carrying out a maximum search over all the m count results (see Fig. 9 and 10 and note col.7, line 41 – col.8, line 18 to determine peak).

Regarding claim 7, Ostman in view of Scott teach all subject matter claimed, as applied to claim 6. Although Ostman does not explicitly teach wherein a number of sections of prescribed length is $k=32$ and a chip length of the sections is $n=32$, but teaches of four in 62 in Fig.8 and four in 64, and teaches eight chip length ($n=8$). However, at the time of the invention, it would have been obvious to a

person of ordinary skill in the art to modify the teaching of Ostman by increasing the number of sections and chip length for the purpose of creating a more robust system from hacking the system. It is well-known to one skilled in the art that the pseudo random noise (PN) sequence is implemented to make signals appear as a noise to an unintended receivers while transmitting and receiving the signals to an intended receivers with a reasonably accurate transmission. Thus, by increasing the chip length or the PN sequence, it would be harder for an unintended receivers from hacking and receiving the signals as the signals would be more complicated to be hacked with higher number of PN sequence.

Applicant has not disclosed that having the length and sections of 32 provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with other numbers, such as four, eight, thirty two or even sixty four because the length of PN sequence can be easily modified so long as the transmitter and the receiver would multiply signals by common a PN sequence. Therefore, it would have been obvious to modify the system of Ostman to obtain the invention as specified in the claim.

Allowable Subject Matter

4. Claims 4 and 5 are allowed.

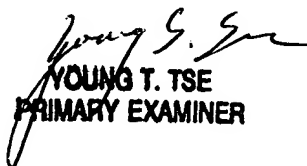
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

Art Unit: 2637

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn
10/28/05


YOUNG T. TSE
PRIMARY EXAMINER